

Remarks

Claims 1, 3-9 and 11-14 are pending in this application. Despite the Examiner's rejections of these claims under 35 U.S.C. §102(e) as being unpatentable, the Applicants offer no further amendments of these claims since it is the Applicants view that the claims patentably distinguish the present invention over the prior art cited by the Examiner.

In section 4 of the office action the Examiner rejects claim 1 under 35 U.S.C. §102(e) as being anticipated by Voevodkin (US 6,470,127). Reconsideration is requested.

Voevodkin describes "a photonic band gap light emitting fiber including two dimensional PBG structures in an environmentally robust glass matrix" (Voevodkin, abstract). Voevodkin does not describe a device in which "the photonic band gap structure is designed to permit light having energy corresponding to the wavelength range to be transmitted only in selected directions, wherein the selected directions comprise a first direction along the photonic band gap structure and at least one second direction where the light transmitted along at least one second direction is able to escape laterally from the photonic band gap structure" (this application, claim 1, emphasis added). Instead in the device of Voevodkin photon emission is limited to directions collinear with the fiber core (Voevodkin, abstract and column 4 lines 24-26). Consequently the present invention as defined by claim 1 is clearly not anticipated by Voevodkin.

In section 4 the Examiner also rejects claim 1 under 35 U.S.C. §102(e) as being anticipated by Komine (US 6,229,939). Reconsideration is again requested.

Komine discloses a single mode fiber laser in which mode filters are used to direct a single mode back into the core (Komine, abstract) while providing greater attenuation of other modes (Komine, column 3, lines 44-48). Komine does not describe a device comprising "a cladding layer around the core and having a periodic lattice structure"

(this application, claim 1) but instead describes use of cladding layers which "are a doped glass having a different index of refraction than the core" (Komine, column 3 lines 25-26). Komine does disclose use of a periodic lattice structure, however this is not used as a cladding but instead to provide a mode filter (Komine, column 3 lines 54-58). Furthermore, Komine does not disclose that "the photonic band gap structure is designed to permit light having energy corresponding to the wavelength range to be transmitted only in selected directions" (this application, claim 1). Instead the mode filters of Komine (which may be photonic band gap materials) are used to discriminate between modes and not wavelengths (Komine, column 3 lines 40-46). Consequently the present invention as defined by claim 1 is clearly not anticipated by Komine.

The documents relied upon by the Examiner fail to disclose or suggest the combination of features of claim 1 either alone or in combination. The arguments above apply equally to the independent method claim, claim 9.

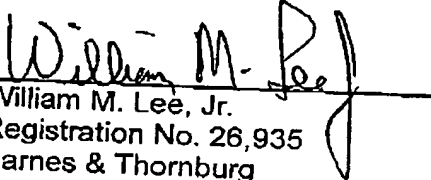
Detailed arguments are not presented in respect of the dependent claims. However the arguments of the Examiner should not be taken to be accepted.

In response to the Examiner's comments in section 5 of the office action, the Applicants confirm that this patent application was only filed in the USA.

In view of the arguments above it is submitted that this application is now in order for allowance and such action is therefore solicited.

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Respectfully submitted,


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